# Pierre Mackenzie

4th year Maths and Computer Science student. Seeking opportunities to work with intelligent and collaborative people where I can learn the most about how to do good research.

## **EDUCATION**

**BSc Computer Science & Mathematics** University of Edinburgh 2021 - 2025Edinburgh, UK

- 90% average to date, 1st class honours expected
- Currently enrolled on ML & Pattern Recognition, ML Theory, Time Series, Statistical Methodology, Algorithmic Game Theory, Reinforcement Learning, Stochastic Modelling
- Past courses include: Algorithms & Data Structures, Foundations of Data Science, Object Oriented Programming, Probability, Linear Algebra, Calculus, Pure Mathematics, Musical Acoustics

## **Academic Exchange Year**

**FPFL** 

2023 - 2024

Lausanne, Switzerland

- Final grade: 5.7 / 6
- Ranked 1st for courses with ML research projects in **Learning in** Biomedicine (6/6) and Computational Photography (5.75/6)
- Courses include: Modern NLP (6/6), Applied Data Analysis (6/6), Graph Theory (5.5/6), Advanced Probability (5.25/6), Algebra (5.75/6), Musical Theory (6/6)

## **High School**

Linlithaow Academy Scotland, UK

2015 - 2021

• Advanced Highers: Maths, CS, Physics, Chemistry, Music (all > 85%)

- Head Boy, Dux Award for top academic performance
- Winner of West Lothian Stellar Award for academic achievement

# **EXPERIENCE**

#### Research Assistant

University of Edinburgh Edinburah, UK

Oct 2024 – Present

- Benchmarking generative tabular data models with **Dr. Fengxiang He**
- Collaboration with Smart Data Foundry for data/algorithm integration.

#### **Quantitative Researcher Intern**

Optiver

Jul 2024 - Sep 2024

Amsterdam, Netherlands

- Researched closing auction trading strategies in European stocks.
- Simulated trading of Eurostoxx and S&P options.
- Attended lectures and examined on future pricing and options theory.
- Received return offer for full-time quant research role in Amsterdam.

#### Machine Learning & Data Science Intern

Adaraa

Jun 2023 - Sep 2023

London, UK

- Conducted 12 weeks of research on topic segmentation with LLMs.
- Developed datasets, evaluation metrics and benchmarking pipelines, and fine-tuned open-source models.
- Drafted a paper for submission to ACL 2025.
- Received return offer for repeat internship.

## LINKS

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# **PROJECTS**

### **ML Workshops**

EdinburghAl

Lectured and designed workshops workshops for 50-100 students per session with EdinburghAI. Topics included neural networks, computer vision and language processing.

### **ML Music Transcription**

Dissertation

Researching ML models for transcribing audio into lead sheets with Prof. Amos Storkey. Focusing on frame-wise chord/melody recognition.

# **SKILLS**

#### **Programming**

Python • PyTorch • Pandas • Scikit-learn • Dart/Flutter • TypeScript/JS • Git/GitHub • Web Development

#### Languages

English (native) • French (native) • Spanish (A2)

#### **Hobbies**

Music: I am a self-taught pianist and classically trained guitarist. I have composed solo piano pieces and various arrangements.

**Sports**: I have been on the Scottish national orienteering team, and regional tennis and badminton teams. I am currently a coach for Edinburgh Ultimate Frisbee.